

# Work Order ID 111611

January-15-14 1:19:36 PM

\*111611\*

Page 1

Item ID: D3439-101 Accept \*N900040100\* Setup Start \*NS1\*  
Revision ID: Stop \*NS2\*  
Item Name: 8" Mirror Assy  
Start Date: 2/21/14 Start Qty: 12.00 \*12\* Cust Item ID:  
Required Date: 2/21/14 Req'd Qty: 12.00 \*12\* Customer:  
Reference:

Approvals: Process Plan: MLJ Date: 1401-17 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_  
Run Start \*NR1\*  
Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3439	Rev B

100 PURCHASING 0.00  
\*100\*  
Purchasing Memo 0.00  
Purchasing Issue P/O: 22711  
For Grote Mirror P/N: 12183  
Possible Supplier: UAP/NAPA  
Material release note is required  
CL 14/01/21 (12)

110 Receive & Inspect for Damage & Mat'l Certs 0.00  
\*110\*  
Packaging Memo 0.00  
Packaging Ensure Material Release Note is attached  
14/10/22 (12)

115 QC6- Inspect dimensions to drawing 0.00  
\*115\*  
QC Memo 0.00  
Quality Control  
12 14/11/22

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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**Work Order ID 111611**

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**\*111611\***

Page 2

Item ID: D3439-101 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: 8" Mirror Assy  
Start Date: 2/21/14 Start Qty: 12.00 **\*12\*** Cust Item ID:  
Required Date: 2/21/14 Req'd Qty: 12.00 **\*12\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120

**\*120\***

Small Fab

Small Fab

Small Fab

**Memo**

- 1- Discard Hardware.  
2- Drill and Tap mirror as per Dwg using DT9670 , then install stud as per dwg.  
3- Plug drain holes with Sikaflex.  
Ensure that mirror adheres to housing.

Pick:

Qty	Part Number	Description	Batch
A/RN/A	Sikaflex-241	391	M12 7097
Sikaflex expiry date 14/8/16			

0.00

0.00

130

**\*130\***

QC

Quality Control

QC5- Inspect part completeness to step on W/O

**Memo**

0.00

0.00

12x

12

14/02/14

DAS  
36  
9-89DAS  
27  
9-89  
14/2/14

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



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### FAULT CATEGORY

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**Work Order ID 111611****\*111611\***

Page 3

January-15-14 1:19:36 PM

Item ID: D3439-101 Accept **\*N9000040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: 8" Mirror Assy  
Start Date: 2/21/14 Start Qty: 12.00 **\*12\*** Cust Item ID:  
Required Date: 2/21/14 Req'd Qty: 12.00 **\*12\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: <u>87180</u>	0.00							
<b>*140*</b>									
Packaging	Memo	0.00				<u>12x</u>		<u>14-2-5</u>	DAS 26 9-89
Packaging									
150	QC21- Final Inspection - Work Order Release	0.00							
<b>*150*</b>									
QC	Memo	0.00				<u>MLG</u>		<u>14-02-05</u>	
Quality Control									

④ 14-02-05

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



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### FAULT CATEGORY

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# Picklist Print

January-15-14 1:19:35 PM

Page 1

Work Order ID: 111611  
 Parent Item: D3439-101  
 Parent Item Name: 8" Mirror Assy

Start Date: 2/21/14

Required Date: 2/21/14

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP A05.07.20New issueKJ/JLM  
 verf:ec

IPP Rev:B 10.09.08 per dwg RevB DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
12183 Grote Mirror		Purchased	No			120	Each	0.0000	1	12		11/16/11	
D3015-3 Locknut		Manufactured	No			120	Each	18.0000	1	12		14/02/04	DAS 36 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		18							
				95758		8							
				96151		10							
D3439-3 Stud		Manufactured	No			120	Each	75.0000	1	12		14/02/03	DAS 36 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				GA		75							
				103874		1							
				104850		34							
				109099		40							
NAS1149C0563R Washer		Purchased	No			120	Each	224.0000	1	12		14/02/04	DAS 36 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST292		224							
				m125928		224							

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

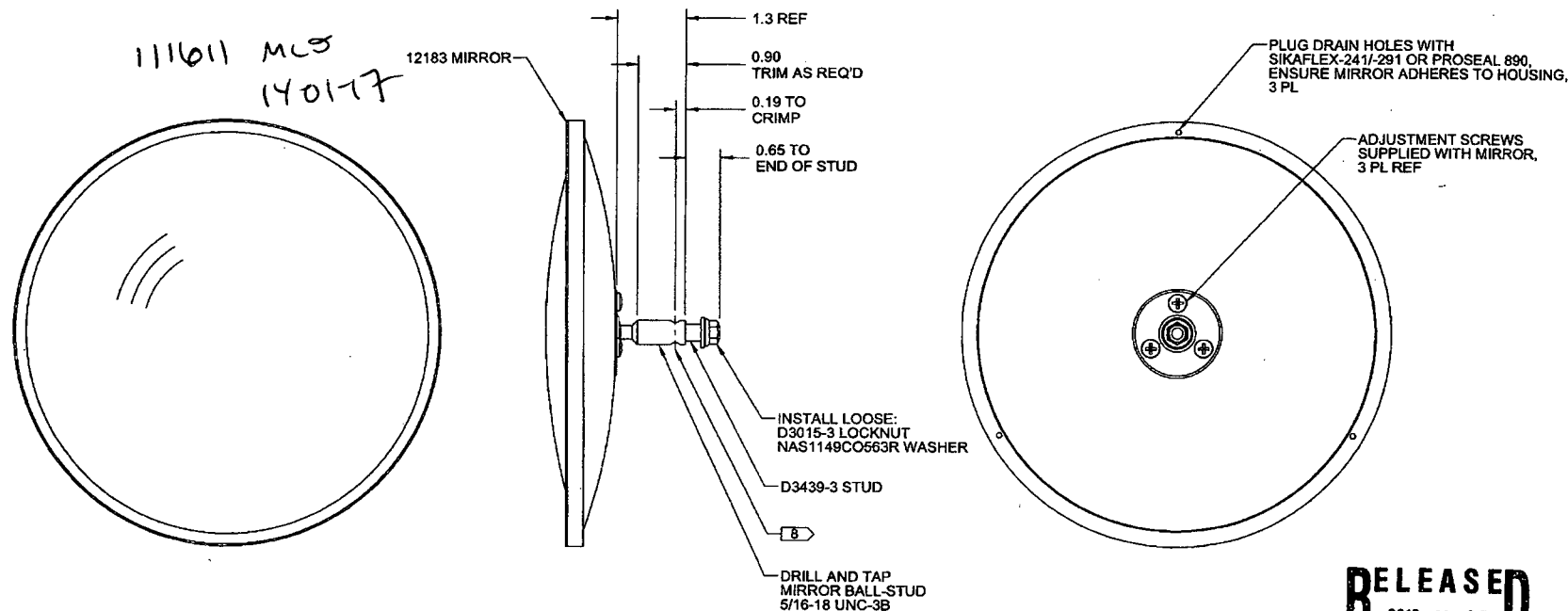
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ITEM	QTY -101	P/N	DESCRIPTION
1	X	D3439-101	MIRROR ASSEMBLY, 8"
2	1	12183	MIRROR 8" (GROTE)
3	1	D3015-3	LOCKNUT
4	1	D3439-3	STUD
5	1	NAS1149CO563R	WASHER (OR AN960JD516)



### D3439-101 MIRROR ASSEMBLY

#### NOTES:

- 1) MATERIAL: MIRROR= 8" ROUND CONVEX MIRROR W/ STAINLESS STEEL CASE  
CENTER-MOUNT BALL-STUD W/ 1/4-20 X 1" DEEP FEMALE THREAD  
GROTE INDUSTRIES, 2600 LANIER DRIVE, MADISON, INDIANA 47250
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3439-101" USING REMOVEABLE TAG
- 7) WEIGHT: 1.18 lbs
- 8) TO INSTALL D3439-3 STUD:
  - APPLY LOCKTITE 262 TO THREADS BEING INSTALLED INTO MIRROR BALL-STUD
  - THREAD D3439-3 STUD INTO MIRROR BALL-STUD
  - CRIMP MIRROR BALL-STUD ON OPPOSING SIDES, 0.19 FROM END AS ILLUSTRATED USING TOOL DT8317
  - CRIMP TO DEPTH OF 0.015-0.030 USING R0.125

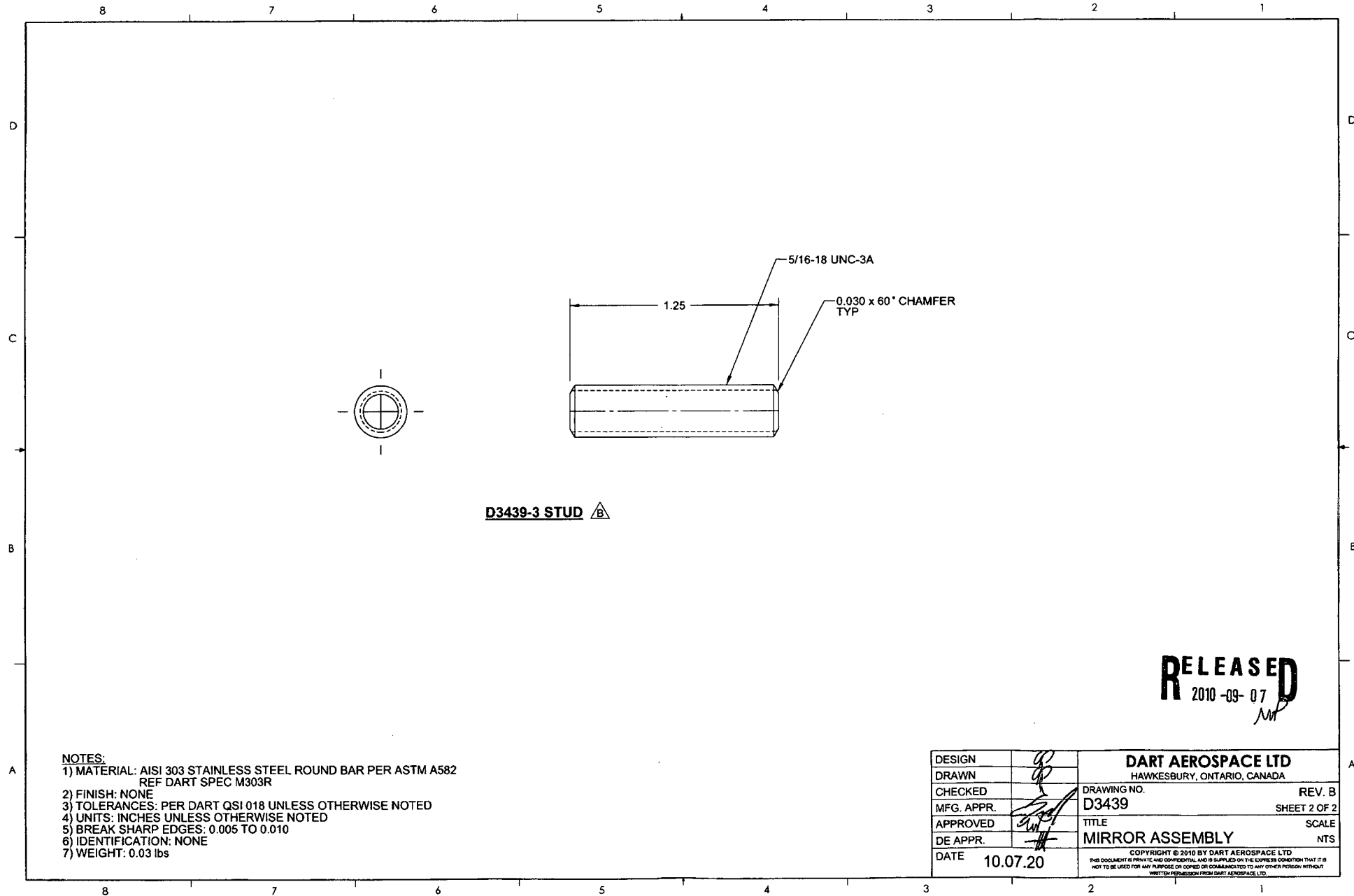
**RELEASED**  
2010-09-07

B	REDRAW, ADD -3 (WAS PURCHASED/TRIMMED BOLT), RMV LPS	CP	10.07.20
A	NEW ISSUE	CP	05.05.27
REV.	DESCRIPTION	BY	DATE
DESIGN	gp		
DRAWN	gp		
CHECKED	gp		
MFG. APPR.	gp		
APPROVED	gp		
DE APPR.	gp		
DATE	10.07.20		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. B  
D3439 SHEET 1 OF 2  
TITLE SCALE  
MIRROR ASSEMBLY NTS

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**D3439-3 STUD**

**RELEASED**  
2010-09-07  
*MM*

**NOTES:**

- 1) MATERIAL: AISI 303 STAINLESS STEEL ROUND BAR PER ASTM A582  
REF DART SPEC M303R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.03 lbs

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN	<i>GP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D3439	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.	<i>[Signature]</i>	MIRROR ASSEMBLY	NTS
DATE	10.07.20	COPYRIGHT © 2010 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE SUPPLIER'S CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO22711**

Purchase Order Date 1/21/2014

PO Print Date 1/21/2014

Page Number 1 of 1

**Order From :**

VC-UAP001

HAWKESBURY AUTO PARTS  
514 MAIN STREET WEST  
HAWKESBURY, ON K6A 2J2  
CA

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

PAID  
1/24/2014

**Contact Name**

**Vendor Phone** 613 632 8575

**Ship To Contact**

**Ship To Phone**

**Ship Via:** Yours ppd

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	12183  AS PER DWG D3439 REV. B B111611	Grote Mirror	1/24/2014 Yes 1/24/2014		12.00 Each	\$21.49	\$257.88

**Line Total:** \$257.88

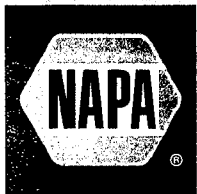
**PO Total:** \$257.88

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.  
No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required **YES** NO  
PST# 6122-5207

Change Nbr:

1

Change Date: 1/21/2014



HAWKESBURY AUTO PARTS INC 5580GST#:  
514 MAIN STREET WEST  
HAWKESBURY, ONT. K6A 2J2  
TEL:632-8575 FAX: 632-1539

861597896RT0001  
DANGEROUS GOODS PERMIT  
EXPIRY DATE:  
PERMIS RELATIF AUX MARCHANDISES DANGEREUSES.  
DATE D'EXPIRATION:  
EMERGENCY TELEPHONE NUMBER 24 HOURS  
CANUTEC 613-996-6666  
NUMÉRO DE TÉLÉPHONE D'URGENCE 24 HEURES  
CANUTEC 613-996-6666

ACCT # N° COMPTE	SOLD TO / VENDU À	DATE	TIME HEURE	STORE # N° MAGASIN	EMP # N° EMPL	INVOICE NO. N° FACTURE
01601	DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7	1/22/14	09:13	060004074	22	426085
SR #		PURCHASE ORDER # N° BON DE COMMANDE				
40		PO22711				
AD		TAX EXEMPTION: EXEMPTION DE TAXE: 6122-5207				
18		TERMS: NET 30 DAYS CHARGE SALE CONDITIONS: DELIVERY: LIVRAISON:				
PART NUMBER / N° PIÈCE	LN	DESCRIPTION	QUANTITY QUANTITE	PRICE / PRIX	NET	TOTAL
12183B	GRO	CONVEX MIRROR	12.00	33.670	21.490	257.88 T10

REFUNDED BY \_\_\_\_\_

VERIFIED BY \_\_\_\_\_

Subtotal 257.88  
Tax 13% ON HARMONIZE 33.52  
Tax 0% 0.00

SIGNATURE

ALL GOODS RETURNED MUST BE ACCOMPANIED BY THIS INVOICE  
TOUTE MARCHANDISE RETOURNÉE DOIT ÊTRE ACCOMPAGNÉE DE CETTE FACTURE

TOTAL ----> CHARGE SALE 291.40